

Having described the invention, the following is claimed:

1. In an apparatus having a chamber for decontaminating articles by exposing said articles to vaporized hydrogen peroxide (VHP), a system for visually verifying a minimum concentration of vaporized hydrogen peroxide (VHP) in said chamber, said system comprising:

a generally continuous web indicator that changes color when exposed to vaporized hydrogen peroxide (VHP), said web indicator having a specific reaction rate based upon a concentration of vaporized hydrogen peroxide (VHP) exposed thereto; and

a device for conveying said web indicator through said chamber during a decontamination cycle at a predetermined rate, wherein a portion of said web indicator is continuously exposed to vaporized hydrogen peroxide (VHP) in said chamber for a specific period of time, said rate and period of exposure being set to cause said web indicator to change color if a predetermined concentration of vaporized hydrogen peroxide (VHP) is present in said chamber.

2. A system according to claim 1, wherein said generally continuous web indicator is continuously advanced through said chamber.

3. A system according to claim 1, wherein said generally continuous web indicator is intermittently advanced through said chamber.

4. A system according to claim 1, wherein said web indicator includes a chemistry that changes color when exposed to vaporized hydrogen peroxide.

5. A system according to claim 4, wherein said chemistry includes an iodide ion (I^-), a thiosulfate ($S_2O_3^{2-}$) ion and starch.
6. A system according to claim 5, wherein said chemistry is coated onto a media.
7. A system according to claim 6, wherein said media is selected from the group consisting of: paper and a polymer.
8. A system according to claim 5, wherein said color change is produced by an accumulation of triiodide ions (I_3^-).
9. A system according to claim 1, wherein said minimum concentration of the vaporized hydrogen peroxide is at least 500 to 1500 ppm.
10. In an apparatus having a chamber for decontaminating articles by exposing said articles to vaporized hydrogen peroxide (VHP), a system for visually verifying a minimum concentration of vaporized hydrogen peroxide (VHP) in said chamber, said system comprising:
 - an indicator that changes color when exposed to vaporized hydrogen peroxide (VHP), said indicator having a specific reaction rate based upon a concentration of vaporized hydrogen peroxide (VHP) exposed thereto.
11. A system according to claim 10, wherein web indicator includes a chemistry that changes color when exposed to vaporized hydrogen peroxide.

12. A system according to claim 11, wherein said chemistry includes an iodide ion (I^-), a thiosulfate ($S_2O_3^{2-}$) ion and starch.
13. A system according to claim 11, wherein said chemistry is coated onto a media.
14. A system according to claim 13, wherein said media is selected from the group consisting of: paper and a polymer.
15. A system according to claim 10, wherein said color change is produced by an accumulation of triiodide ions (I_3^-).
16. A system according to claim 10, wherein said minimum concentration of the vaporized hydrogen peroxide is at least 500 to 1500 ppm.
17. A system according to claim 10, wherein said indicator includes a plurality of indicator panels, each indicator panel having a respective chemistry that causes each indicator panel to change color after a different exposure time to said minimum concentration of vapor phase hydrogen peroxide.
18. A system according to claim 17, wherein said indicator has N indicator panels, each of said N indicator panels having a respective chemistry that causes a color change after an exposure time of N Δt minutes.

19. In an apparatus having a chamber for decontaminating articles by exposing said articles to vaporized hydrogen peroxide (VHP), a method for visually verifying a minimum concentration of vaporized hydrogen peroxide (VHP) in said chamber, said method comprising the steps of:

advancing a generally continuous web indicator through said chamber;

and

exposing said web indicator to a concentration of vaporized hydrogen peroxide, said web indicator changing color when exposed to vaporized hydrogen peroxide (VHP), wherein said web indicator has a specific reaction rate based upon the concentration of vaporized hydrogen peroxide (VHP) exposed thereto.

20. A method according to claim 19, wherein said generally continuous web indicator is advanced continuously through said chamber.

21. A method according to claim 19, wherein said generally continuous web indicator is advanced intermittently through said chamber.

22. A method according to claim 19, wherein said web indicator includes a chemistry that changes color when exposed to vaporized hydrogen peroxide.

23. A method according to claim 22, wherein said chemistry includes an iodide ion (I^-), a thiosulfate ($S_2O_3^{2-}$) ion and starch.

24. A method according to claim 22, wherein said chemistry is coated onto a media.

25. A method according to claim 24, wherein said media is selected from the group consisting of: paper and a polymer.
26. A system according to claim 22, wherein said color change is produced by an accumulation of triiodide ions (I_3^-).
27. A method according to claim 19 wherein said minimum concentration of the vaporized hydrogen peroxide is at least 500 to 1500 ppm.
28. In an apparatus having a chamber for decontaminating articles by exposing said articles to vaporized hydrogen peroxide (VHP), a system for visually verifying a minimum concentration of vaporized hydrogen peroxide (VHP) in said chamber, said system comprising:
- introducing vaporized hydrogen peroxide into said chamber; and
 - exposing an indicator to a concentration of vaporized hydrogen peroxide, said indicator changing color when exposed to vaporized hydrogen peroxide (VHP), wherein said indicator has a specific reaction rate based upon the concentration of vaporized hydrogen peroxide (VHP) exposed thereto.
29. A method according to claim 28, wherein web indicator includes a chemistry that changes color when exposed to vaporized hydrogen peroxide.
30. A method according to claim 29, wherein said chemistry includes an iodide ion (I^-), a thiosulfate ($S_2O_3^{2-}$) ion and starch.

31. A method according to claim 29, wherein said chemistry is coated onto a media.
32. A method according to claim 31, wherein said media is selected from the group consisting of: paper and a polymer.
33. A method according to claim 28, wherein said color change is produced by an accumulation of triiodide ions (I_3^-).
34. A method according to claim 28, wherein said minimum concentration of the vaporized hydrogen peroxide is at least 500 to 1500 ppm.
35. A method according to claim 28, wherein said indicator includes a plurality of indicator panels, each indicator panel having a respective chemistry that causes each indicator panel to change color after a different exposure time to said minimum concentration of vapor phase hydrogen peroxide.
36. A method according to claim 35, wherein said indicator has N indicator panels, each of said N indicator panels having a respective chemistry that causes a color change after an exposure time of N Δt minutes.